

What is claimed is:

1           1.       A method of manufacturing an integrated circuit package, comprising:  
2                   installing a carrier onto an upper surface of a substrate, wherein said  
3 carrier defines a cavity;  
4                   attaching a semiconductor die to said upper surface of said substrate  
5 within said cavity of said carrier;  
6                   aligning an assembly over said semiconductor die, wherein said assembly  
7 comprises a heat sink and a thermally conductive element;  
8                   resting said assembly on said carrier such that said thermally conductive  
9 element does not directly contact said semiconductor die; and  
10                  encapsulating said cavity to form a prepackage such that a portion of said  
11 heat sink is exposed to the surroundings of said package.

1           2.       The method of claim 1, wherein said assembly is rested on said carrier  
2 such that said thermally conductive element and said semiconductor die are separated by  
3 a distance of about five (5) mils or less.

1           3.       The method of claim 1, wherein said attaching said semiconductor die to  
2 said upper surface of said substrate is by a direct chip attachment.

1           4.       The method of claim 1, further comprising singulating said prepackage to  
2 form said package, wherein a top portion and a side portion of said heat sink are exposed  
3 to the surroundings of said package.

1           5.       A method of manufacturing an integrated circuit package, comprising:  
2                   installing a carrier onto a substrate;

3                   attaching a semiconductor die to said substrate;  
4                   aligning an assembly over said semiconductor die, wherein said assembly  
5 comprises a heat sink and a thermally conductive element;  
6                   resting said assembly on said carrier such that said thermally conductive  
7 element does not directly contact said semiconductor die; and  
8                   encapsulating said thermally conductive element and said heat sink such  
9 that a portion of said heat sink is exposed to the surroundings of said package.